CLAIMS

Amend the claims as follows.

1. (Currently amended) A system for transmitting data, comprising:

a server operable to generate user data for use at a client station;

a spatial compressor component of the server that is operable to inspect the user data and generate spatially compressed data therefrom;

a temporal compressor component of the server that is operable to inspect the user data and generate temporally compressed data therefrom;

a client station coupled to the server and structured to receive the spatially compressed data and the temporally compressed data;

a decoder component of the client station that is operable to transform the spatially compressed data and the temporally compressed data into a frame portion; and

an image generator structured to generate an image from the frame portion and show the image in a form for use by a user of the client station;

where the temporal compressor is adapted to XOR a portion of the user data from a current frame with a portion of the user data having a same spatial location in a previous frame to generate a difference map if the portion of the user data from the previous frame is in cache; and

where the temporal compressor is adapted to generate a difference table by run length encoding each scan line of the difference map.

2. (Currently amended) The system of claim 1

where~~in~~ the server and the client station are coupled to one another by a communication link;; and

where~~in~~ the server and the client station communicate to one another over the communication link using a remote desktop communication protocol.

3. (Original) The system of claim 2, further comprising a data server coupled to the server through a second communication link, the server and the data server communicating by using a communication protocol other than the remote desktop communication protocol used by the server and the client station.

4. (Currently amended) The system according to claim 3 where~~in~~ the data server is a video server.

5. (Original) The system according to claim 1, further comprising one or more additional client stations each of which is coupled to the server and structured to receive the spatially compressed data and the temporally compressed data.

6. (Currently amended) The system according to claim 1 where~~in~~ the frame portion is a bitmap.

7. (Currently amended) The system according to claim 1 where~~in~~ the frame portion is one frame of a video.

8. (Currently amended) The system according to claim 1

where~~in~~ the user data comprises data that is for the use of the client station at a first and a second time~~;~~ and

where~~in~~ the temporal compressor is structured to perform ~~an~~ the XOR operation using data for the use of the client station at the first and the second time as inputs, and produce ~~a~~ the difference ~~output~~ map.

9. (Canceled)

10. (Currently amended) The system according to claim ~~9~~ 8

where~~in~~ the ~~encoded output~~ difference table comprises one or more number pairs~~;~~

where~~in~~ a first number of the number pair indicates the number of zeros in a current run~~;~~ and

where~~in~~ a second number of the number pair indicates a symbol following the last zero in the current run.

11. (Currently amended) The system according to claim 10~~;~~ where~~in~~ if a last number of a row in the difference ~~output~~ map to be run length encoded is a zero, for the last number pair in the ~~encoded output~~ difference table, a first number of the last number pair indicates one less than the number of zeros in a current run.

12. (Currently amended) The system according to claim 1 wherein the temporal compressor creates a lossless temporal encoding of the user data.

13. (Original) The system according to claim 1, further comprising a comparison component of the server that is operable to examine the user data, the spatially compressed data, and the temporally compressed data, and to select any combination therefrom to transmit to the client station.

14. (Original) The system according to claim 13 wherein the comparison component is structured to select the smallest combination or sub-combination of the user data, the spatially compressed data, and the temporally compressed data prior to transmitting it to the client station.

15. (Currently amended) A system for transmitting data, comprising:

a server running an application program for generating multimedia data;

a data compressor structured to accept the multimedia data at an input and produce spatially and temporally compressed multimedia data at an output;

a thin client coupled to the server and structured to receive the spatially and temporally compressed multimedia data; and

an image generator structured to generate a multimedia image from the spatially and temporally compressed multimedia data received by the thin client;

where the data compressor is adapted to XOR a portion of the user data from a current frame with a portion of the user data having a same spatial location in a previous frame to generate a difference map if the portion of the user data from the previous frame is in cache; and

where the data compressor is adapted to generate a difference table by run length encoding each scan line of the difference map.

16. (Currently amended) The system of claim 15

wherein the server and the thin client are coupled to one another by a communication link; and

wherein the server and the thin client communicate to one another over the communication link using a remote desktop communication protocol.

17. (Original) The system of claim 16, further comprising a data server coupled to the server through a second communication link, the server and the data server communicating by using a communication protocol other than the remote desktop communication protocol used by the server and the thin client.

18. (Currently amended) The system according to claim 17 where~~in~~ the data server is a video server.

19. (Original) The system according to claim 15, further comprising one or more additional thin clients each of which is coupled to the server and structured to receive the spatially and temporally compressed multimedia data.

20. (Currently amended) The system according to claim 15

where~~in~~ the multimedia data comprises data that is for the use of the thin client at a first and a second time~~,~~; and

where~~in~~ the data compressor is structured to perform an XOR operation using data for the use of the thin client at the first and the second time as inputs, and produce a difference ~~output~~ map.

21. (Canceled)

22. (Currently amended) The system according to claim ~~21~~ 20

where~~in~~ the ~~encoded output~~ difference table comprises one or more number pairs~~,~~;

where~~in~~ a first number of the number pair indicates the number of zeros in a current run~~,~~; and

where~~in~~ a second number of the number pair indicates a symbol following the last zero in the current run.

23. (Currently amended) The system according to claim 21, where~~in~~, if a last number of a row in the difference ~~output~~ map to be run length encoded is a zero, for the last number pair in the ~~encoded output~~ difference table, a first number of the last number pair indicates one less than the number of zeros in a current run.

24. (Currently amended) A method of transferring data in a system including a server coupled to a thin client by a communication link that carries a remote desktop protocol, the method comprising:

on the server:

generating multimedia data;

compressing the multimedia data spatially ~~and temporally~~ to make spatially compressed multimedia data; and

determining if a portion of the user data from a current frame is stored in cache;

generating a difference map by temporally compressing the spatially compressed multimedia data by XORing the portion of the user data from the current frame with a portion of the user data having a same spatial location in a previous frame responsive to the determining; and

generating a difference table by run length encoding each scan line of the difference map;

transmitting the ~~compressed multimedia data~~ difference table to the thin client;

on the thin client:

receiving the ~~compressed multimedia data~~ difference table from the server;

de-compressing the ~~compressed multimedia data~~ difference table into useable data; and

presenting the useable data on the thin client.

25. (Original) The method of claim 24, further comprising storing the useable data in a cache on the thin client.

26. (Currently amended) The method of claim 24 where~~in~~ presenting the useable data on the thin client comprises generating an image on a display screen.

27. (Currently amended) The method of claim 24 where~~in~~ presenting the useable data on the thin client comprises showing a video clip on a display coupled to the thin client.

28. (Currently amended) The method of claim 27 where~~in~~ showing a video clip comprises showing a series of frames on the display.

29. (Currently amended) The method of claim 27 where~~in~~ generating multimedia data comprises:

establishing a data connection with a video server;

retrieving video data from the video server; and

converting the video data to display data.

30. (Currently amended) The method of claim 24 where~~in~~ a plurality of thin clients are coupled to the server, the method further comprising transmitting the ~~compressed multimedia data~~ the difference table to the plurality of the thin clients coupled to the server.

31. (Currently amended) The method of claim 30 where~~in~~ transmitting the ~~compressed multimedia data~~ difference table to the plurality of the thin clients comprises transmitting the ~~compressed multimedia data~~ difference table to the plurality of thin clients simultaneously.

32. (Currently amended) The method of claim 24 where~~in~~ de-compressing the ~~compressed multimedia data~~ difference table comprises creating bitmaps of data.

33. (Currently amended) The method of claim 24 where~~in~~ compressing the ~~multimedia~~ difference table comprises lossless data compression of the multimedia data.

34. (Currently amended) The method of claim 24 where~~in~~ compressing the multimedia data comprises performing an XOR operation on data that is scheduled to be presented on the thin client at different times, the XOR operation creating a the difference ~~code~~ output.

35. (Original) The method of claim 34, further comprising encoding a plurality of difference codes.

36. (Currently amended) The method of claim 35~~;~~

where~~in~~ encoding a plurality of difference codes comprises generating one or more number pairs~~;~~;

where~~in~~ a first number of the number pair indicates the number of zeros in a current run~~;~~; and

wherein a second number of the number pair indicates a symbol following the last zero in the current run.

37. (Currently amended) The method according to claim 35,

wherein encoding a plurality of difference codes comprises generating one or more number pairs, and

wherein if a last number of a row in the difference codes to be run length encoded is zero, for the last number pair in the encoded output difference table, a first number of a last number pair indicates one less than the number of zeros in a current run.

38. (Currently amended) The method according to claim 24 wherein compressing the multimedia spatially and temporally comprises:

performing a procedure on the multimedia data intended to compress the multimedia spatially; and

determining if the first procedure created a result smaller than the multimedia data.

39. (Currently amended) The method according to claim 24 wherein compressing the multimedia spatially and temporally comprises:

performing a procedure on the multimedia data intended to compress the multimedia temporally; and

determining if the procedure created a result smaller than the multimedia data.

40. (New) The system of claim 1 where the client station includes the cache.

41. (New) The system of claim 1 where the temporal compressor is adapted to indicate to the server that it should transmit the difference map to the client station if difference map is smaller than the portion of the user data from the current frame.

42. (New) The system of claim 15 where the cache is included in the thin client.

43. (New) The system of claim 15 where the temporal compressor is adapted to indicate to the server that it should transmit the difference map to the client station if difference map is smaller than the portion of the user data from the current frame.

44. (New) The method of claim 24 where determining if the portion of the user data from a current frame is stored in the cache includes determining if the portion of the user data from a current frame is stored in the cache on the thin client by keeping track of the cache contents of the thin client cache.

45. (New) The method of claim 24 where transmitting the difference table to the thin client occurs responsive to a determination that the difference table is smaller than the multimedia data.

46. (New) A system for transmitting data, comprising:

a server operable to generate user data for use at a client station;

a spatial compressor component of the server that is operable to inspect the user data and generate spatially compressed data therefrom;

a temporal compressor component of the server that is operable to inspect the user data and generate temporally compressed data therefrom;

a client station coupled to the server by a communication link, and structured to receive the spatially compressed data and the temporally compressed data;

a decoder component of the client station that is operable to transform the spatially compressed data and the temporally compressed data into a frame portion; ~~and~~

an image generator structured to generate an image from the frame portion and show the image in a form for use by a user of the client station; and

a data server, distinct from the client station, coupled to the server through a second communication link, the server and the data server communicating by using a communication protocol other than the remote desktop communication protocol used by the server and the client station.